

ABSTRACT OF THE DISCLOSURE

A microfluidic device is provided in which dead volume is small, response is satisfactory and a channel can be changed easily depending on application of an analysis or a synthesis. The microfluidic device includes pump units each of which has a first joint surface, a pumping mechanism and channels that connect to the pumping mechanism and opens to the first joint surface, and a channel unit having a second joint surface for being detachably joined to the first joint surface and channels that open to the second joint surface and are connectable to the channels of the pump unit. At least one of a material constituting the first joint surface and a material constituting the second joint surface is an elastic material having a self-sealing feature.